

REMARKS

In the Office Action, claims 1-6, 9, 16, 19, 20, 23, 25 and 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi et al. (US 5,506,375) in view of Yamanami et al. (4,878,553), claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi et al. (US 5,506,375) in view of Yamanami et al. (4,878,553), and further in view of Yamanami et al. (US 2002/0044208), and claims 21 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kikuchi et al. (US 5,506,375) in view of Yamanami et al. (4,878,553), and further in view of Keely et al (US 2002/0063694).

The gist of the instant invention is to provide an electronic whiteboard with an input induction layer which is formed by at least one electromagnetic induction layer having a wire lattice for sensing the position of a writing pen, and a control circuit for signal amplification, filtering acquisition and data processing. The wire lattice comprises wires winded along X and Y axes and interlaced for forming induction cells. Each wire is winded with multiple turns to form a number of longitudes or latitudes across the wire lattice. Each induction cell is surrounded by two adjacent longitudes and two adjacent latitudes. To increase the resolution and precision of sensing the pen location, multiple electromagnetic induction layers can be overlaid and interlaced. The size of an induction cell on one electromagnetic induction layer may be the same as or different from the size of an induction cell on another electromagnetic induction layer.

Kikuchi et al. teach a multilayer circuit board for a coordinate detecting apparatus

comprising a sensor region having X-coordinate sensor lines which are equidistantly arranged in parallel and Y-coordinate sensor lines which are also equidistantly arranged in parallel. As can be seen from FIGs. 1a, 1b and 2 of Kikuchi et al., **the X-coordinate and Y-coordinate sensor lines 20 and 21 are separate lines formed on respective circuit boards instead of wires winded with multiple turns to form multiple longitudes or latitudes.** It is also important to note that throughout the disclosure of Kikuchi et al., there is never a teaching that multiple circuit boards can be overlaid to increase the resolution and precision of sensing the position.

Yamanami et al. teach a position detecting apparatus for detecting a position pointed by a pointer on a system. A plurality of conductors arranged in a side-by-side fashion is provided for a position detection section in the direction of position detection. More specifically, **“loop coils” are arranged in parallel in such a manner as to partially overlap the adjacent loop coils.** There are no winded wires forming a wire lattice shown in the art of Yamanami et al. The induction cells constructed in the wire lattice of the instant invention are not discussed either. Furthermore, Yamanami et al. neither disclose nor suggest using multiple position detection sections, overlaying or interlacing for improving precision of position detection.

In response to the office action, claim 1 is amended to distinctly point out the subject matter of the invention in a patentable way to overcome the rejection under U.S.C. §103(a) over Kikuchi et al. (US 5,506,375) and Yamanami et al. (4,878,553). More specifically, the amended claim 1 includes the limitation that **said input induction layer has a plurality of electromagnetic induction layers overlaid one another and**

each electromagnetic induction layer has a wire lattice comprising, first wires wound on said wire lattice, each of said first wires being wound with multiple turns to form a plurality of latitudes across said wire lattice; second wires interlaced with said first wires, each of said second wires being wound with multiple turns to form a plurality of longitudes across said lattice; and a plurality of induction cells each induction cell being a space surrounded by two adjacent longitudes and two adjacent latitudes.

As discussed above, the coordinate sensor lines of Kikuchi et al. and the loop coils of Yamanami et al. are significantly different from the electromagnetic induction layer formed by **a wire lattice with wires wound to form longitudes and latitudes** shown in FIGs. 3-7 of the instant invention. A person of ordinary skill can also recognize that the control circuit of the instant invention would have to be different from the cited prior arts and need to base on different techniques and principles to sense the position for the whiteboard of the present invention. Furthermore, none of the cited prior arts teaches, suggests or anticipates using **a plurality of electromagnetic induction layers overlaid one another.** As pointed out above, overlaying and interlacing multiple electrogmanetic induction layers can improve the precision of position sensing because the coordinate unit of the whiteboard is essentially reduced. Applicant respectfully submits that the amended claim 1 have overcome the rejection under U.S.C. §103(a) over Kikuchi et al. (US 5,506,375) and Yamanami et al. (4,878,553) and should be allowable. By virtue of dependency, claims 2-6, 9-11, 16, 19, 20, 21, 23, 25 and 28 should also be allowable.

The foregoing analysis and discussion has clearly elucidated that the instant invention differs from the cited prior arts. The physical difference results in different effects and is not obvious. The above amendment also corrects a number of editorial and grammatical errors in the specification, and informalities in the claims. The amended claims 1-6, 9-11, 16, 19, 20, 21, 23, 25 and 28 are in full condition for allowance. Prompt and favorable reconsideration of the application is respectfully solicited.

Respectfully submitted,

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